IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

CHARLESTON DIVISION

IN RE: ETHICON, INC. PELVIC REPAIR
SYSTEMS PRODUCTS LIABILITY
LITIGATION

MDL NO. 2327

THIS DOCUMENT RELATES TO:

JO HUSKEY, et al. v. Ethicon, et al.

2:12-cv-05201

RULE 26 REBUTTAL EXPERT REPORT OF ERIN TEETER CAREY, MD MSCR

The following report is provided pursuant to Rule 26 of the Federal Rules of Civil Procedure. My opinions are as follows:

I. QUALIFICATIONS

I completed my medical school training at the University of Missouri-Kansas City in 2006 and went on to complete a residency in obstetrics and gynecology at the Mayo Clinic in 2010. Pursuing an interest in pelvic surgery and pain, I completed a fellowship in Advanced Laparoscopy and Pelvic Pain at the University of North Carolina in 2012 (this training was sponsored by the American Association of Gynecologic Laparoscopists). During the fellowship I received a Masters of Science and Clinical Research and developed a strong interest in adjunctive management of complex abdominal and pelvic pain syndromes. This prompted a year of additional training with the Anesthesia Department in the division of Pain Anesthesia. The focus of this year was differentiating the causes of pelvic pain, with a primary focus of deciphering somatic from visceral pain and neuropathic pain syndromes. The collaborative effort enhanced both division's understanding of pelvic pain. It allowed for exposure to multiple causes of abdominal and pelvic pain in my patients including the assessment and management of functional low back pain, spinal etiology of pain, sacroiliac dysfunction, and pelvic floor disorders. During my time in both fellowships I also had the opportunity to work with the UNC Mesh Pain Clinic- a collaboration between the Pelvic Pain and Urogynecology division working together to assess and treat mesh related pain.

Dr. Carey's Curriculum Vitae is attached hereto and by reference made a part hereof. Please see **Appendix A** attached.

II. SUMMARY AND DISCUSSION OF OPINIONS

I was asked to review and offer opinions regarding Dr. Christina Pradmudji's independent medical exam report and her related opinions in her deposition of April 11, 2014. The opinions offered by Dr. Pradmudji were new and/or different from those originally contained in her Rule 26 expert report, dated 3/21/2014 and therefore warrant rebuttal.

This report offers rebuttal opinions and confirms my agreement with the opinions provided in Dr. Steege's original expert report, submitted 2/21/2014. Prior to the submission of Dr. Steege's report, I evaluated Plaintiff Jo Huskey in Chapel Hill, NC. This evaluation consisted of a review of her complete medical records, a comprehensive independent interview, and a thorough pelvic examination to determine the location and source of her vaginal and pelvic pain, conducted along with Dr. Steege. I similarly rely on the medical literature cited in Dr. Steege's report. I am also providing additional references addressing the specific opinions provided here.

The key opinions originally offered by Dr. Steege and with which I agree include:

- 1) Ms. Huskey's current sexual pain and pelvic pain are secondary to pelvic floor myalgias resulting from the placement and subsequent complications of the TVT-O device.
- 2) Her bladder pain is most likely a result of inflammation and scarring from the TVT-O and its removal.
- 3) This pain has severely impacted her daily life and sexual activity.
- 4) She most likely has central sensitization and a neuropathic component to her pain.
- 5) In performing a differential diagnosis, I have ruled out that her current pelvic pain and sexual pain are caused by her back condition, her history of back surgery, her sacroiliac dysfunction, her history of unrelated pelvic surgery, or diverticulitis/ diverticulosis.
- 6) Her prognosis is guarded.

The following opinions expressed by Dr. Pradmudji in her IME and/or corresponding deposition are inaccurate and/or reflect inadequate understanding and knowledge of pelvic and sexual pain issues.

1. Dr. Pradmudji opines that the Ms. Huskey's levator spasm is not caused by the TVT-O because it is not in the same location.

Dr. Pramudji draws the conclusion that the mesh or mesh removal surgery did not cause the levator spasm because the mesh is anterior and the vaginal pain appeared posterior to her. That is not how the pelvic floor muscles work. The vagina is a tube surrounded in a complex muscular setting. The muscles of the pelvic floor work as a unit. The spasm is occurring in the entire pelvic floor musculature, not just the one area of inflammation and banding noted by Dr. Pradmudji. Posterior muscles will react to pain anywhere in the pelvis, including the anterior vagina.

The levator ani muscle complex is a unique, three-dimensional structure. The levator muscle has several subdivisions that insert into the posterior pubic bone. These attachments are critical because muscles exert their action by contraction and their function can be impacted by muscle

or nerve damage in the area. The TVT-O passes through the insertions of the levator muscle. In addition, Dr. Siddique's operative report describes the mesh being dissected up to the vaginal sidewall and retracting behind the pubic bone. (HuskeyJ_SJOHH_MDR00056-7) This is also the area of the levator muscles and their insertions.

Dr. Pradmudji's confusion about the location and function of the pelvic floor muscles may be the result of her rudimentary understanding of pelvic anatomy. When asked what muscles the transobturator goes through, if any, when placed, she responded, "I'd have to look at the anatomy book because I don't have them memorized." (Deposition p. 228)

2. Instead, Dr. Pradmudji believes that the levator spasm is most likely caused by SI joint dysfunction.

The SI joint is the largest spinal joint in the body. It is weight bearing and connected to other structures via a complex myofascial network. SI joint pain is a commonly overlooked cause of chronic low back pain (estimated as a source for up to 30% of axial low back pain), particularly because it is a clinical diagnosis. The standard way to diagnose SI joint pain is to perform a diagnostic intrarticular injection to assess pain relief. The causes of SI joint pain include obesity, leg length discrepancy, gait abnormalities, surgery, pregnancy, arthritis and trauma (such as running).

SI joint pain is most commonly localized to the low back and buttock with radiation of pain occasionally in to the lower extremity, upper back, and groin. The SI joint dysfunction was present before the TVT-O, but not accompanied by any pelvic floor myalgia. I particularly find it interesting that Dr. Pradmudji considers the SI joint close enough to cause levator spasm, but the TVT-O is not. While SI joint dysfunction has been well described as a contributor to pelvic girdle pain, particularly in pregnancy, again these affected muscles are in the upper buttock (between the posterior iliac crests near the SI joint), low back and pubic symphysis. Occasionally this pain may also radiate down the posterior thighs, but does not affect the levator ani complex. SI joint dysfunction does not cause the constellation of symptoms and physical findings present in Mrs. Huskey. This occurrence is not reported in the literature, nor I have I seen it in my practice.

3. Per Dr. Pradmudji, the levator spasm was precipitated by a speculum exam.

According to Dr. Pradmudji, "the levator pain that has occurred since the mesh was explanted was precipitated on speculum exam" (IME Report p. 4) and somehow triggered that muscle to go into spasm. (Deposition p. 207) A speculum exam triggering chronic and intractable muscle spasm has never been reported anywhere in the medical literature. I have never seen such a phenomenon. Based on my training, education and experience, a speculum exam cannot cause a chronic and intractable muscle spasm and did not do so in Mrs. Huskey's case.

4. According to Dr. Pradmudji, the pelvic exam findings are minimal.

¹ SA Shobeiri et al Appearance of the Levator Ani Muscle Subdivisions in Endovaginal Three-Dimensional Ultrasonography. Obstet Gynecol 2009; 114: 66-72.

Dr. Pradmudji's exam and exam findings differed dramatically from that performed by Dr. Steege and myself. In her IME report, Dr. Pradmudji describes only "mild tenderness throughout the vagina to palpation" on Ms. Huskey's pelvic exam. Dr. Steege and I noted tenderness of the levator ani, obturator and pririformis muscles bilaterally with significant tenderness on the left. Single digit palpation reproduced significant tenderness behind the pubic arch bilaterally, left greater than right. The thickening of the left vaginal sidewall was significantly tender when palpated. Both the suburethra and bladder were tender. Dr. Pradmudji's rudimentary exam is inadequate to determine the etiology of pain in a patient presenting with life-altering pelvic pain.

In addition, Dr. Pradmudji either did not examine or failed to report any neurological assessment. In a patient as Ms. Huskey, an examination to determine the presence of neuropathic pain elements is critical. Our exam described pain with movement of a q-tip inserted in the vagina, which is suggestive of abnormal pain processing and probably central sensitization – a disorder of nerve regulation. We also noted hyperalgesia to pinprick along the left mons, which is a neuropathic event.

5. Dr. Pradmudji opines that Ms. Huskey's bladder symptoms may be caused by undiagnosed interstitial cystitis.

Dr. Pradmudji also comes up with a new opinion that Ms. Huskey may have chronic interstitial cystitis (IC) and that this disorder in and of itself can lead to concomitant levator ani spasm." (IME Report p. 5) According to Dr. Pradmudji, this is a condition that is not caused by pelvic surgery, but can be exacerbated by any type of pelvic surgery." (IME Report p. 5) Ms. Huskey began experiencing bladder symptoms in the fall of 2011 following the second mesh revision surgery. She underwent two cystoscopies to evaluate the bladder pain. Dr. Pradmudji ignores Dr. Siddique's (Mrs. Huskey's treating physician) opinion that the bladder symptoms were related to inflammation from the sling.

Dr. Pradmudji does not note the urethral and bladder tenderness found on our exam in her IME report. She does, however, describe tenderness between the urethra and vagina in her deposition. P. 198 The bladder symptoms are, more likely than not, from the inflammation and subsequent scarring from the TVT-O and subsequent invasive mesh removal. Dr. Siddiqui even described this inflammation as "chronically infected space with edematous tissue." (HuskeyJ_SJOHH_MDR00056-7) This is the source of the new onset bladder symptoms experienced by Ms. Huskey, not a theoretical medical condition that Mrs. Huskey has never been diagnosed with. Dr. Pradmudji again overlooks the obvious source to come up with a much less likely explanation that does not include the TVT-O sling.

Interstitial cystitis is a chronic pain condition associated with urinary bladder. The etiology of interstitial cystitis is unknown, however many factors have been suggested, including chronic or subclinical infection, an auto immune response, genetic predisposition- basically any condition that elicits an inflammatory response. The diagnostic criteria initially proposed by the National Institutes of Arthritis Diabetes Digestive and Kidney Diseases (NIDDK) are not currently used to diagnose IC. Rather, a global constellation of generalized symptoms qualifies someone as having the disorder. These broad symptoms include suprapubic pain, bladder pain, dysuria, urgency, frequency, and eoncurrent urinary tract infections. These same symptoms are often present in

women suffering from the effects of mesh implantation, such as Mrs. Huskey. More likely than not Mrs. Huskey's bladder symptoms are secondary to the attempted mesh removal, not a new diagnosis of IC in the setting of normal bladder capacity without evidence of Hunner's ulcers.

All opinions are given to a reasonable degree of medical certainty. I also reserve the right to amend or modify this report if new information becomes available.

III. FACTS AND DATA CONSIDERED

Please see Appendix B attached.

IV. EXHIBITS WHICH I PLAN TO USE AS A SUMMARY OF OR IN SUPPORT OF MY OPINIONS

Any and all documents referenced within the report of Dr. Carey, the original report of Dr. Steege and Dr. Carey, or listed within the attached facts and data considered. Any additional materials to be used will be timely disclosed.

V. COMPENSATION

I am being compensated \$500 per hour.

VI. LISTING OF CASES IN WHICH TESTIMONY HAS BEEN GIVEN IN THE LAST FOUR YEARS

None.

This 24th day of April, 2014.

Erin T. Carey M.D.

APPENDIX A

Revised January 2014

CURRICULUM VITAE Erin Teeter Carey, MD MSCR

CONTACT INFORMATION
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L	1	censure	:

5/2010- Medical Board of North Carolina License 6/2013 7/2013- Kansas State Board of Healing Arts present

Board Certification

6/2010 ABOG Written Examination- PASSED ABOG Oral Examination- PASSED

EDUCATION

7/2012- 6/2013	University of North Carolina Pain Anesthesia Fellowship
9/2010- 5/2012	University of North Carolina Gillings School of Public Health, Chapel Hill, North Carolina. Masters of Science and Clinical Research.
7/2010- 6/2012	University of North Carolina Advanced Laparoscopy and Pelvic Pain Fellowship. Sanctioned by American Association of Gynecologic Laparoscopists. Chapel Hill, North Carolina.
7/2006- 6/2010	Obstetrics and Gynecology Residency Training Program. Mayo Clinic, Rochester, Minnesota.
9/1999- 5/2006	University of Missouri-Kansas City- Combined BA-MD Program, Kansas City, Missouri. M.D. 2006.
9/1999- 5/2006	University of Missouri-Kansas City- Combined BA-MD Program. Kansas City, Missouri. Bachelor of Liberal Arts 2006.

HONORS AND AWARDS

- Contemporary OB/GYN's panel of Emerging Experts 1/2012, 1/2013
- Excellence in Suturing AAGL Fellow Award 9/2010
- Administrative Chief Resident in Obstetrics and Gynecology, Mayo Clinic 7/2009-6/2010
- Lawrence Randall Travel Award for Excellence in Leadership, Mayo Clinic 1/2010
- Leonard Tow Humanism in Medicine Award, University of Missouri-Kansas City School of Medicine 5/2006
- Gold Humanism Honor Society 7/2005-5/2006
- Dr. Mary King Scholarship 9/2002-5/2006

ACADEMIC APPOINTMENTS

7/2013- 6/2014	Clinical Instructor, Center for Pelvic Pain and Sexual Health, Department of Obstetrics and Gynecology, University of Kansas Medical Center	
7/2012- 6/2013	Clinical Instructor, Division of Advanced Laparoscopy and Pelvic Pain Department of Obstetrics and Gynecology, University of North Carolina, Chapel Hill, NC	
7/2010- 6/2012	Clinical Teaching Fellow, Department of Obstetrics and Gynecology, University of North Carolina, Chapel Hill, NC	
HOSPITAL APPOINTMENTS		

7/2013-	Clinical Instructor, Center for Pelvic Pain and Sexual Health, Department of
6/2014	Obstetrics and Gynecology, University of Kansas Medical Center
7/2012-	Clinical Instructor, Division of Advanced Laparoscopy and Pelvic Pain
6/2013	Department of Obstetrics and Gynecology, University of North Carolina, Chapel Hill, NC
7/2010-	Clinical Teaching Fellow, Division of Advanced Laparoscopy and Pelvic Pain
6/2012	Department of Obstetrics and Gynecology, University of North Carolina, Chapel Hill, NC
7/2009-	Administrative Chief Resident, Department of Obstetrics and Gynecology, Mayo
6/2010	Clinic, Rochester, MN
10/2008-	Residency Applicant Interview Committee, Resident Member, Mayo Clinic,
2/2009	Rochester, MN

7/2008-	Education Committee, Resident Member. Mayo Clinic, Rochester, MN
6/2010	
7/2006-	Quality Improvement Committee, Resident Member. Mayo Clinic, Rochester, MN
6/2010	
7/2004-	University of Missouri-Kansas City School of Medicine Admissions Committee
6/2005	

LEADERSHIP APPOINTMENTS

1/2014- present	National Vulvodynia Association Treatment Outcomes Registry: Principal Investigator
10/2013- present	International Pelvic Pain Society Basics Course Coordinator
1/2012- present	Contemporary OB/GYN Emerging Expert
11/2011- 12/2011	ABC News Correspondent, 20/20 "Giving Life: A Risky Proposition". Freetown, Sierra Leone
9/2011- present	American Association of Gynecologic Laparoscopists (AAGL) Consortium to Advance Research. Protocol Committee, Vice-chair
7/2010 present	Ad Hoc Reviewer for Journal of Minimally Invasive Gynecology

PROFESSIONAL MEMBERSHIPS

8/2013- present	National Vulvodynia Association
1/2005-	American College of Obstetricians and Gynecologists
present	
6/2010-	American Association of Gynecologic Laparoscopists
present	
7/2010-	International Pelvic Pain Society
present	
8/2011-	International Association for the Study of Pain
	international Association for the Study of Fam
present	

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

> Carey E, Martin C, Siedhoff MT, As-Sanie S. Biopsychosocial Correlates of Persistent Postsurgical Pain in Women with Endometriosis. International Journal of Gynecology and Obstetrics February. 2014

Findley AD, Siedhoff MT, Hobbs KA, Steege JF, Carey ET, McCall CA, Steiner AZ. Short-term effects of salpingectomy during laparoscopic hysterectomy on ovarian reserve: a pilot randomized controlled trial. Fertil Steril. 2013 Aug 29.

Carey E, Zolnoun D. Superimposed MRSA Infection of Vulvar Eczematous Dermatitis. The Journal of Reproductive Medicine. 2013 May-Jun; 58(5-6); 261-3.

Wagner J, Damitz L, Carey E, Zolnoun D. Bilateral Accessory Breast Tissue of the Vulva: A Case Report Introducing a Novel Labiaplasty Technique. Annals of Plastic Surgery. 2013 May; 60(5):549-52.

Siedhoff M, Carey E, Findley A, Riggins L, Garrett J, Steege J. Effect of Extreme Obesity on Outcomes in Laparoscopic Hysterectomy. Journal of Minimally Invasive Gynecology 2012 Nov;19(6):701-7.

Peedicayil A, Weaver A, Li X, Carey E, Cliby W and Marian A. Incidence and timing of venous thromboembolism after surgery for gynecological cancer. Gynecologic Oncology, 2011 Apr;121(1):64-9.

Carey E, El-Nashar S, Hopkins M, Creedon D, Cliby W, Famuyide A. Pathologic Characteristics of Women who had Hysterectomy after Global Endometrial Ablation. Journal of Minimally Invasive Gynecology Jan-Feb 2011.

ORIGINAL PUBLICATIONS IN PROGRESS

Siedhoff MT, Clark LH, Findley AD, Hobbs KA, Carey E. Mechanical Bowel Preparation before Laparoscopic Hysterectomy: A Randomized Controlled Trial. (Submitted 10/2013).

Bair E, Tu F, Wilson D, As-Sanie S, Carey E, Slade G, Ohrbach R, Fillingim R, Greenspan J, Dubner R, Diatchenko L, Maixner W, Zolnoun D. Putative Demographic Risk Factors of Dysmenorrhea Among Participants in the OPPERA Study. (Submitted 1/2014).

Carey E, Zolnoun D, Slade G, Bartley E, Ohrbach R, Mulkey F, Brownstein N, Nneji V, Dubner R, Knott C, Greenspan J, Fillingim R, Maixner W, Bair E. Association Between Gynecological Characteristics and Temporomandibular Disorders: Insights from the OPPERA Study. The Journal of Pain. (Manuscript in progress).

Carey E, Bair E, Tu F, Wilson D, As-Sanie S, Slade G, Ohrbach R, Fillingim R, Greenspan J, Dubner R, Diatchenko L, Maixner W, Zolnoun D Putative Psychosocial Risk Factors for Dysmenorrhea Among Participants in the OPPERA Study. (Manuscript in Progress).

OTHER PUBLICATIONS

Carey E. First Aid for the USMLE Step 3--Online Question Bank Contributor of OB/GYN questions. 2008.

PRESENTATIONS

Siedhoff MT, Clark LH, Findley AD, Hobbs KA, **Carey E**. Mechanical Bowel Preparation before Laparoscopic Hysterectomy: A Randomized Controlled Trial. 42ND AAGL Global Congress on Minimally Invasive Gynecology. National Harbor, MD. November 2013 [Oral Presentation].

Findley AD, Siedhoff MT, Hobbs KA, Steege JF, Carey ET, McCall CA, Steiner AZ. Short-Term Effects of Salpingectomy during Laparoscopic Hysterectomy on Ovarian Reserve: A Randomized Controlled Trial. 42ND AAGL Global Congress on Minimally Invasive Gynecology. National Harbor, MD. November 2013 [Oral Presentation].

Findley A, Carey E, Siedhoff M, Steege J. Pelvic Pain Experience and Education for Fellows in Minimally Invasive Gynecologic Surgery. 41st AAGL Global Congress on Minimally Invasive Gynecology. Las Vegas, Nevada. November 2012 [Oral Presentation].

Carey E, Zolnoun D, Slade G, Bartley E, Ohrbach R, Mulkey F, Brownstein N, Nneji V, Dubner R, Knott C, Greenspan J, Fillingim R, Maixner W, Bair E. Association Between Gynecological Characteristics and Temporomandibular Disorders: Insights from the OPPERA Study. International Association for the Study of Pain. Milan, Italy, August 2012 [Poster].

Wilson, D. Carey E, Zolnoun D, Slade G, Hu W, Browne E, Ohrbach R, Greenspan J, Dubner R, Fillingim R, Maixner W, Bair E. Putative Risk Factors for Dysmenorrhea: Results from the OPPERA Study. International Association for the Study of Pain. Milan, Italy, August 2012 [Poster].

Gaynor S, Zolnoun D, Carey E, Slade G, Ohrbach R, Fillingim R, Greenspan J, Dubner R, Maixner W, Bair E. OPPERA Study Identifies an Association Between the Use of Hormonal Contraceptives and Orofacial Pain and Headaches. International Association for the Study of Pain. Milan, Italy, August 2012 [Poster].

Carey E, Siedhoff MT, Sokal DC. Vaginal Leakage: A Potentially Unappreciated Influence on Effectiveness of Agents in Vaginal Gels. Multipurpose Prevention Technologies for Reproductive Health 2011 Symposium. Washington, DC, November 2011 [Poster].

Carey E, Siedhoff MT, As-Sanie S, Zolnoun DZ. Biopsychosocial Correlates of Persistent Post-surgical Pain in Women with Endometriosis. 40th AAGL Global Congress on Minimally Invasive Gynecology. Hollywood, FL, November 2011 [Oral Presentation].

Siedhoff MT, Carey E, Riggins, LE, Steege JF. Impact of Extremes of Obesity on Outcomes in Laparoscopic Hysterectomy. 40th AAGL Global Congress on Minimally Invasive Gynecology. Hollywood, FL, November 2011 [Oral Presentation].

Siedhoff MT, Carey E, Riggins, LE, Steege JF. Impact of Uterine Weight on Outcomes in Laparoscopic Hysterectomy. 40th AAGL Global Congress on Minimally Invasive Gynecology. Hollywood, FL, November 2011 [Poster].

Siedhoff MT, Carey E, Steege JF. A 5-Port Technique for TLH in the Teaching Setting. 40th AAGL Global Congress on Minimally Invasive Gynecology. Hollywood, FL, November 2011 [Poster].

Siedhoff MT, Carey E, Steege JF. Laparoscopic Excision of a Densely Adherent Ovarian Remnant Utilizing a Temporary Ureteral Stent. 40th AAGL Global Congress on Minimally Invasive Gynecology. Hollywood, FL, November 2011 [Poster].

Carey E, Siedhoff MT, As-Sanie S, Zolnoun DZ. Biopyschosocial Correlates of Persistent Post-surgical Pain in Women with Endometriosis. 11thWorld Congress on Endometriosis. Montpellier, France, September 2011 [Poster].

Carey E, El-Nashar S, Creedon D, Famuyide A, Hopkins M. Feasibility of Hysterosalpingography Following a Combined Radiofrequency Global Endometrial Ablation and Hysteroscopic Sterilization Procedure. AAGL Annual Meeting November 2009. [Oral presentation].

Carey E, El-Nashar S, Hopkins M, Creedon D, Cliby W, Famuyide A. *Pathologic Characteristics of Women who had Hysterectomy after Global Endometrial Ablation*. AAGL Annual Meeting. October 2008. [Oral Presentation].

Keller D, Wright J, **Teeter Carey E**. Retrospective Evaluation of Antiretroviral Pharmacotherapy in an Urban infectious Diseases Clinic. Abstract published in Pharmacotherapy 2005 Vol. 25, P. 463. UMKC Research Day. May 2005. [Oral Presentation].

VIDEO PRESENTATIONS

Siedhoff, M, and Carey E. Laparoscopic hysterectomy, resection of endometriosis nodule with ureterolysis. Surgical Film Festival National DVD. September 2011.

Siedhoff, M and Carey E. Robotic Myomectomy. SURFF Surgical Film Festival. March 2011.

INVITED PRESENTATIONS

Dysmenorrhea as a Chronic Pain Condition: Update from the OPPERA study. Grand Rounds. Department of Obstetrics and Gynecology. University of Vermont. Burlington, Vermont. January 2014.

Dysmenorrhea: A Functional (and Modifiable?) Chronic Pain Syndrome. Grand Rounds. Department of Obstetrics and Gynecology. Henry Ford Hospital. Detroit, Michigan. December 2013.

Medical and Behavioral Therapies for Chronic Pelvic Pain. International Pelvic Pain Society. Orlando, Florida. October 2013.

The Evil Twins of Vestibulodynia: Mucosa vs. Muscle. CINDOR. International Symposium of Interdisciplinary Pain Management. Sao Paolo, Brazil. June 2013.

Sacral Neuromodulation: The Next 'Big Thing' in Gynecologic Pain? CINDOR. International Symposium of Interdisciplinary Pain Management. Sao Paolo, Brazil. June 2013.

Dysmenorrhea: A Cyclic Chronic Pain Syndrome? CINDOR. International Symposium of Interdisciplinary Pain Management. Sao Paolo, Brazil. June 2013.

Introduction to Gynecologic Surgery. General Surgery Resident Didactics. University of North Carolina. Chapel Hill, North Carolina. July 2012.

The Disillusionment of Dysmenorrhea. Grand Rounds, Department of Obstetrics and Gynecology, University of North Carolina. Chapel Hill, North Carolina. January 2012.

Best of the AAGL Endo-Exchange LISTSERV® Mailing List. Co-Moderator. 40th AAGL Global Congress on Minimally Invasive Gynecology. Hollywood, FL, November 2011.

Dysmenorrhea as a Functional Pain Syndrome. Grand Rounds, Department of Obstetrics and Gynecology, Greenville Hospital Systems. Greenville, South Carolina. October 2011.

Cervical Cancer Screening in Developing Countries: Results of our Screening Project in the Dominican Republic. Grand Rounds, Department of Obstetrics and Gynecology. Mayo Clinic. Rochester, Minnesota, April 2009.

Incidental Appendectomy in Patients less than 35: A review of the literature. Grand Rounds, Department of Obstetrics and Gynecology. Mayo Clinic. Rochester, Minnesota, January 2009.

Abnormal Uterine Bleeding: Evaluation and Management. 1st and 2nd Year Resident Didactic Lecture Series, Mayo Clinic. Rochester, Minnesota. September 2008.

Takotsubo Cardiomyopathy: Transient Left Ventricular Apical Ballooning Mimicking ST-Elevation Myocardial Infarction. Grand Rounds, Department of Emergency Medicine, Mayo Clinic. Rochester, Minnesota, October 2006.

COMMUNITY SERVICE

Mariam Clinic- Free health clinic service for uninsured adults in Raleigh, NC. 9/2010-2/2012.

International Medical Alliance. Cervical cancer screening project in the Dominican Republic (2/2009, 2/2010, 2/2011)

Maison de Naissance. Birthing home in rural Haiti. Education of nurse midwives, patient education, and implementation of an electronic medical records program in the clinic. 1/2004, 12/2006.

APPENDIX B

FACTS AND DATA CONSIDERED

Dr. Steege's references and list of facts and data considered are incorporated herein, in addition to the following:

- 1. ETH.MESH.03753682
- 2. ETH.MESH.11445930
- 3. ETH.MESH.02229061
- 4. ETH.MESH.09170211
- 5. ETH.MESH.00590896
- 6. ETH.MESH.09158424
- 7. ETH.MESH.02234752
- 8. ETH.MESH.01202101
- 9. ETH.MESH.10237693
- 10. ETH.MESH.00589602
- 11. ETH.MESH.02130286
- 12. ETH.MESH01795909
- 13. ETH.MESH.02180759
- 14. ETH MESH 09161482
- 15. ETH MESH 11434367
- 16. ETH MESH 11434264
- 17. Abbott S, Unger CA, Evans JM, et al. Evaluation and management of complications from synthetic mesh after pelvic reconstructive surgery: a multicenter study. Am J Obstet Gynecol 2014;210:163.e1-8.
- 18. Dunn GE et. al, Changed Women: The Long-Term Impact of Vaginal Mesh Complications, Female Pelvic Med Reconstr Surg 2014;20: 131-136.

- 19. Hansen BL et. al, Long-Term Follow-up of Treatment for Synthetic Mesh Complications, Female Pelvic Med Reconstr Surg 2014;20: 126-130
- 20. Hou JC, Alhalabi F, Lemack GE, Zimmern PE, Outcome of Trans-Vaginal Mesh and Tape Removed for Pain Only, The Journal of Urology (2014), doi: 10, 1016/j.juro.2014.04.006.
- 21. Shobeiri SA et al Appearance of the Levator Ani Muscle Subdivisions in Endovaginal Three-Dimensional Ultrasonography. Obstet Gynecol 2009; 114: 66-72.
- 22. Warren et. al Is there a high incidence of hysterectomy and other nonbladder surgeries before and after onset of interstitial cystitis/bladder pain syndrome? Am J Obstet Gynecol. 2013 Jan;208(1):77